

Remarks

Applicants request reconsideration and withdrawal of the rejections set forth in the above-mentioned Office Action in view of the foregoing amendments and the following remarks.

Claims 1-3, 5-10 and 12 remain pending in this application, with Claim 1 being the sole independent claim. Claim 1 has been amended herein.

Claims 10 and 12 were rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. The Office Action takes the position that the term “positive type photosensitive material” in Claims 10 and 12 “is not associated with a heating temperature, and therefore, does not have support in the specification.” The Office Action reasons that a positive type resist composite does not necessarily equate to a positive type photosensitive material. While Applicants do not dispute that the terms in question are not necessarily synonymous, the term used in the claims is adequately supported in the specification. While at page 44 of the specification, layer 204 is not explicitly described as being a positive type photosensitive material layer, the layer is described as a positive type resist layer and is described as being photodegradable. Since the material is a photodegradable positive type, one of ordinary skill in the art would recognize that such can be construed as a positive type photosensitive material layer. Accordingly, reconsideration and withdrawal of the § 112 rejection are requested.

Claims 1-3, 5-9 and 12 were rejected under 35 U.S.C. 103(a) as being obvious over Kubota et al. '422 (European Patent Application No. 1 380 422) in view of Uozumi (U.S. Patent Application Publication No. 2004/0214945) and Kubota et al. (U.S. Patent Application Publication No. 2004/0072107). This rejection is also traversed.

With the present invention, a diglyme solvent can be used to dissolve a resin for forming a solid layer and a mixed solvent of xylene and methyl isobutyl ketone can be used to dissolve the coating layer. After the solid layer is formed, solvent may remain therein. If the solvent of the coating layer has compatibility with the remaining solvent from the solid layer, a compatible layer can be generated. Such a layer is referred to as "scum." Such compatibility between solvents can be reduced by using the diglyme solvent and the solvent containing xylene and methyl isobutyl ketone, as claimed. This, in turn, can control the formation of the scum.

Kubota et al. '422 describes a liquid jet recording head in which a substrate is coated with a cross-linking positive resist layer 203 that includes a copolymer of methacrylate and methacrylic acid. A PMIPK positive resist layer 204 is coated on resist layer 203 and exposed using deep UV exposure. As discussed previously, Applicants submit that a solid layer formed of the acryl copolymer is dissolved in cyclohexanone and the coating layer is dissolved in methyl isobutyl ketone. Both of these solvents are ketone solvents and cannot be construed as a mixed solvent containing xylene and methyl isobutyl ketone. The materials in Kubota et al. '422 would not control the scum caused by the compatibility of solvents.

Accordingly, Kubota et al. '422 fails to disclose or suggest at least providing a positive type photosensitive material layer containing a copolymer of methacrylic acid and methacrylate ester on a substrate in a diglyme solvent, forming a solid layer for forming the flow path from the positive type photosensitive material layer on the substrate, and forming, on the substrate where the solid layer is formed, a coating resin layer containing a cationically polymerizable resin, a basic material having a pair of nonshared electrons and a solvent containing xylene and methyl isobutyl ketone for coating the solid layer, as is recited in independent Claim 1.

Thus, Kubota et al. '422 fails to disclose or suggest important features of the present invention recited in independent Claim 1.

Uozumi and Kubota et al. '107 have also been reviewed, but are not believed to remedy the deficiencies of Kubota et al. '422 discussed above.

Accordingly, independent Claim 1 is patentable over the citations of record. Dependent Claims 2, 3, 5-10, and 12 are also allowable, in their own right, for defining features of the present invention in addition to those recited in independent Claim 1. Individual consideration of the dependent claims is requested.

This Amendment After Final Rejection is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to clearly place this application in condition for allowance. This Amendment was not earlier presented because Applicants

earnestly believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of this Amendment under 37 CFR 1.116 is respectfully requested.

For the foregoing reasons, Applicants respectfully submit that the present invention is patentably defined by the claims and that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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